

Kentucky Department for Environmental Protection
Division of Waste Management
Underground Storage Tank Branch
300 Sower Boulevard – Frankfort KY 40601
(502) 564-5981

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DRAFT

UST Impressed Current Cathodic Protection Evaluation

Date Form Completed		/ /	
1. UST Facility Information			
Agency Interest Number (AI)			
UST Facility Name			
UST Facility Physical Address		Street Address:	
		City:	County:
UST Facility Physical Phone		Phone: () -	Alternate Phone: () -
2. UST System Owner Information			
UST System Owner Name			
UST System Owner Contact Information		Phone: () -	Alternate Phone: () -
		Email:	
3. Tester Information			
Name of Person Performing Test			
Certification / License #			
Certification Type (mark all that apply)		<input type="checkbox"/> NACE <input type="checkbox"/> STI <input type="checkbox"/> Other (specify):	
Contact Information		Phone: () -	Email:
Company Name			
Company Mailing Address		Street Address:	
		City:	State:
		Zip Code:	-
4. Cathodic Protection Tester Evaluation (mark only one)			
Date of Evaluation		/ /	Next Test Date Due By / /
Reason for Evaluation (mark only one)		<input type="checkbox"/> New Install (within 180 days) <input type="checkbox"/> Reevaluation following repair / modification (within 180 days)	
		<input type="checkbox"/> Routine (every 36 months) <input type="checkbox"/> Reevaluation following a failure (within 30 days)	
If the remote and the local potential readings do not both indicate the same test result on all protected structure (both pass or both fail), the cathodic protection system shall be reevaluate and/or retested by a corrosion expert. Complete Section 6.			<input type="checkbox"/> Inconclusive
All protected structures at this UST facility pass the cathodic protection system evaluation and it is judged that adequate cathodic protection has been provided to the UST system. Complete Section 7.			<input type="checkbox"/> Pass
One or more protected structure at this UST facility fail the cathodic protection system evaluation and it is judged that adequate cathodic protection has not been provided to the UST system. Complete Section 8.			<input type="checkbox"/> Fail
I certify that the cathodic protection evaluation was performed in accordance with the appropriate code of practice. I further certify that all the information provided on this document is true, accurate, and complete.			
Cathodic Protection Tester Certification	Printed		Date / /
	Signature		
	License #		License Expiration Date / /

AI _____

5. Corrosion Expert Evaluation *(mark only one)*

Date of Evaluation	/ /		
Reason for Evaluation <i>(mark only one)</i>	<input type="checkbox"/> Inconclusive result from cathodic protection tester evaluation; <input type="checkbox"/> Repairs to galvanized or uncoated steel piping are conducted; or <input type="checkbox"/> Supplemental anodes are added to the UST system without following an acceptable industry code.		
All protected structures at this UST facility pass the cathodic protection system evaluation and it is judged that adequate cathodic protection has been provided to the UST system. Complete Section 7.		<input type="checkbox"/> Pass	
One or more protected structure at this UST facility fail the cathodic protection system evaluation and it is judged that adequate cathodic protection has not been provided to the UST system. Complete Section 8.		<input type="checkbox"/> Fail	
I certify that the cathodic protection evaluation was performed in accordance with the appropriate code of practice. I further certify that all the information provided on this document is true, accurate, and complete.			
Corrosion Expert Certification	<i>Printed</i>		Date / /
	<i>Signature</i>		
	License #		License Expiration Date / /

6. Applicable Evaluation Criteria *(mark all that apply)*

Structure-to-soil potential more negative than -850 mV with respect to a Cu/CuSO ₄ reference electrode with the protective current temporarily interrupted (instant-off).	<input type="checkbox"/> 850 Off
Structure tested exhibits at least 100 mV of cathodic polarization.	<input type="checkbox"/> 100 mV Polarization

7. Required Actions *(mark only one)*

Cathodic protection is adequate. No further action is necessary at this time. Next evaluation due 3 years from the date of this evaluation or if another reason listed in Section 5 (Reason for Evaluation) occurs.	<input type="checkbox"/> None
Cathodic protection may not be adequate. Reevaluate during the next 90 days to determine if passing results can be achieved.	<input type="checkbox"/> Reevaluation
Cathodic protection is not adequate. A repair or modification is necessary as soon as practical, but within the next 90 days.	<input type="checkbox"/> Repair & Reevaluation

8. Description of Evaluated UST System

Tank	Capacity (gal)	Product	Tanks	Piping	STP	Dispensers
1						
2						
3						
4						
5						
6						
7						

9. Impressed Current Rectifier Data

Manufacturer		Model		Serial Number		Rated DC Output		Initial Design or Lastly Recommended Output	
						Volts	Amps	Volts	Amps
Event	Date	Tap Setting		DC Output		Hour Meter	Comments		
		Coarse	Fine	Volts	Amps				
"As Found"	/ /								
"As Left"	/ /								

Complete if system is designed to report on measurements (e.g. individual lead wires for each anode are installed and measurement shunts are present).

[illegible]

Provide detailed information about all modifications or repairs made to the cathodic protection system. Attach a detailed drawing of the UST facility and cathodic protection systems. Sufficient detail shall be given in order to clearly indicate where the reference electrode was placed for each structure-to-soil potential that is recorded on the survey forms. At a minimum indicate the following:

- a) Tanks
b) Piping
c) Dispensers
d) Buildings and Streets
e) Anodes and Wires
f) Location of CP Test Stations
g) Each reference electrode placement (indicated by a code: 1, 2, T-1, T-2) corresponding with the appropriate line numbers in Section 13.

- ☐ Additional anodes for an impressed current system (*attach corrosion expert's design*).
- ☐ Repairs or replacement of rectifier (*explain in "Remarks/Other" below*).
- ☐ Anode header cables repaired and/or replaced (*explain in "Remarks/Other" below*).
- ☐ Impressed current protected tanks/piping not electrically continuous (*explain in "Remarks/Other" below*).

Remarks/Other:

Complete to document measurements of continuity on UST systems that are protected by impressed current cathodic protection systems.

[illegible]

¹ Describe the cathodically protected structure being demonstrated as isolated from unprotected structures (e.g. plus tank bottom).

² Describe the “other” protected structure being demonstrated as continuous (e.g. plus steel line @ STP).

³ Record the fixed remote instant off structure-to-soil potential of the protected structure "A" in millivolts (e.g. -915 mV).

⁴ Record the fixed remote instant off structure-to-soil potential of the protected structure "B" in millivolts (e.g. -908 mV).

⁵ Record the voltage difference observed between structure "A" and "B" when conducting point-to-point testing (e.g. 1 mV).

⁶ Document whether the test (fixed cell and/or point-to-point) indicated the protected structure was isolated, continuous or inconclusive.

Use this section to document a survey of an impressed current cathodic protection system by obtaining structure-to-soil potential measurements.

- ⁷ Designate numerically or by code on the site drawing each local reference electrode placement (e.g. 1, 2, 3..., T-1, T-2..., P-1, P-2....etc.).
- ⁸ Describe the structure that is being tested (e.g. plus tank, diesel piping, flex connector, etc.).
- ⁹ Describe where contact with the structure that is being tested is made (e.g. plus tank bottom, diesel piping @ dispenser 7/8, etc.)
- ¹⁰ Describe the exact location where the reference electrode is placed for each measurement (e.g. soil @ UNL tank STP manway, soil @ DSL tank manway, etc.).
- ¹¹ Record the structure-to-soil potential observed with the current applied (e.g. -1070 mV).
- ¹² Record the structure-to-soil potential observed with the current is interrupted (e.g. -875 mV).
- ¹³ 100 mV Polarization test only – Record the voltage observed at the end of the test period (e.g. 575 mV).
- ¹⁴ 100 mV Polarization test only – Subtract the final voltage from the instant off voltage (e.g. 680- mV – 575 mV = 105 mV).
- ¹⁵ Indicate if the tested structure passed or failed one of the two acceptable criteria (850 instant off or 100 mV polarization) based on interpretation of the data.